

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 F16H48/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 F16H B60K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 203 901 A (DANA CORP) 8 May 2002 (2002-05-08) paragraph '0019! - paragraph '0024! figures 1-3,6	1
X	US 2 620 055 A (LOUIS FASULO) 2 December 1952 (1952-12-02) column 3, line 10 -column 5, line 63 figures 2,3,6,7	1,2
X	US 4 703 671 A (JIKIHARA YOSHIRO) 3 November 1987 (1987-11-03) column 3, line 19 -column 4, line 10 figures 1,3	1,2
X	US 4 167 881 A (BELL DALE K ET AL) 18 September 1979 (1979-09-18) the whole document	1
	--- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the International filing date but later than the priority date claimed

- *T* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *B* document member of the same patent family

Date of the actual completion of the International search

2 March 2004

Date of mailing of the International search report

08/03/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Truchot, A

INTERNATIONAL SEARCH REPORT

Internat Application No
PCT/IB 03/03049

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 464 953 A (TAR LORANT) 14 August 1984 (1984-08-14) figure 1	3, 4
A	FR 1 493 006 A (COMMELIN HYACINTHE MAURICE) 25 August 1967 (1967-08-25) column 2, line 5 - line 24 figure 2	1
A	DE 11 61 483 B (JEAN RENE DUFOUR; MACH AGRICOLES ROTATIVES SIMAR) 16 January 1964 (1964-01-16) figures	1
A	US 5 030 181 A (KELLER WALTER) 9 July 1991 (1991-07-09) figure 1	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat

Application No

PCT/TB 03/03049

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1203901	A	08-05-2002	US 2002103053 A1 BR 0104733 A CA 2359552 A1 EP 1203901 A2	01-08-2002 25-06-2002 25-04-2002 08-05-2002
US 2620055	A	02-12-1952	NONE	
US 4703671	A	03-11-1987	JP 61137149 U CA 1243858 A1	26-08-1986 01-11-1988
US 4167881	A	18-09-1979	AU 511700 B2 AU 2385477 A CA 1057082 A1 DE 2721701 A1 FR 2351323 A1 GB 1548080 A SE 7705557 A	04-09-1980 05-10-1978 26-06-1979 24-11-1977 09-12-1977 04-07-1979 14-11-1977
US 4464953	A	14-08-1984	HU 186755 B DE 3139744 A1 GB 2089913 A ,B SU 1105112 A3	30-09-1985 08-07-1982 30-06-1982 23-07-1984
FR 1493006	A	25-08-1967	NONE	
DE 1161483	B	16-01-1964	NONE	
US 5030181	A	09-07-1991	BR 8807424 A DE 3808066 A1 DE 3861591 D1 WO 8807639 A1 EP 0363367 A1 JP 2502747 T	15-05-1990 29-09-1988 21-02-1991 06-10-1988 18-04-1990 30-08-1990